UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,528	08/19/2003	John D. Barber	LA-7241-111.US	4478

58688 7590 04/07/2006

CONNOLLY BOVE LODGE & HUTZ LLP
P.O. BOX 2207
WILMINGTON, DE 19899

EXAMINER	
MOORE, MARGARET G	
ART UNIT	**PAPER NUMBER**
1712	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,528	BARBER ET AL.	
	Examiner	Art Unit	
	Margaret G. Moore	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *73 to 88, 90 to 96* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *73 to 88, 90 to 96* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Consistent with that noted in paragraph 1 of the previous office action, applicants are requested to update the status of the application referred to on page 8. Upon further review of the specification the Examiner has found a Brief Description of the Drawings on page 10.

2. Applicants have not cited any support in the specification or provided any specific definition for the newly added phrase "physically stable". As the Examiner will note in the rejection over Ertle et al. found below, this phrase is *extremely* broad and carries very little, if any, weight. If applicants are to argue or are of the position that this phrase carries patentable weight or a definite meaning, they must cite support for this newly added phrase in the specification. If no support can be found, this would appear to be new matter. Again, though, given the fact that this term really carries little weight and has no real meaning, the teachings in the specification are sufficient to support the breadth of this term as the Examiner reads it. See paragraph 67 to 76 of the instant specification.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 73 to 78, 80, 82, 83, 85, 87, 88, 90, 91 and 93 to 96 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ertle et al.

5. Claim 86 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ertle et al.

6. These rejections rely on the rationale of record and this will not be repeated. Since patentees rely on the same logic in an effort to overcome both rejections, they will be addressed simultaneously.

Applicants are of the belief that the newly added phrase "physically stable" dis-

tinguishes the solid material in the claims from that found in Ertle et al. The Examiner does not agree.

The term "physically stable" is extremely broad and applicants are reminded that the Examiner must give claim language the broadest reasonable interpretation, reading the claims in light of the specification. Since the specification does not define "physically stable" the Examiner must make her own determination as to what this phrase means. The alternative to physically stable is a solid is not stable. If a solid is not stable it would disintegrate or break down. The fact that the solid in Ertle et al. expands when heated does not make this solid unstable. The solid in Ertle does not expand at room temperature or even at temperatures above 200 °F. Such a solid clearly is physically stable. In addition, expanding does not per se render the solid unstable because the solid particle is still intact and doesn't break down or react. Even if expansion could be considered unstable, once expanded the solid is again stable. This language simply is insufficient to overcome the prior art rejection. The Examiner notes that applicants' specification provides nothing that indicates that their particles do not expand when heated.

7. Claims 73, 75 to 88 and 90 to 96 are rejected under 35 U.S.C. 102(e) as being anticipated by Booth et al.

8. Claims 73, 75, 76, 79, 81 to 88, 90 to 92 and 94 to 96 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 00/73370, herein Booth.

9. Claims 73, 75 to 88 and 90 to 96 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 to 26 of U.S. Patent No. 6,921,789. Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons of record.

10. The rationale behind these three rejections was detailed in the previous office action and as such this will not be repeated. Since applicants traverse these rejections together, the Examiner will address them simultaneously as well.

The basis for this traversal relies on the position that the requirement of a "thermoset polymeric liquid and a thermoplastic vulcanizate polymeric liquid" is not met by the prior art. They cite the position of Ex. Mulcahy that the teachings in Booth et al. do not support claims to thermoset resin. This Examiner agrees with the position of Ex. Mulcahy that the teachings in Booth et al. were not sufficient to allow for claims drawn to thermoset resins. If the instant claims were limited to thermoset, the Examiner would withdraw this rejection.

The instant specification is different from the specification in Booth in one very important manner. The Examiner draws attention to paragraph 3 of the instant specification, particularly this excerpt:

"Newer classes of polymers, thermoplastic vulcanizates, combine processing characteristics of thermoplastics and thermosets. For example, reaction injection molding is a process whereby a viscous partially polymerized compound is injection molded much like a typical thermoplastic polymer but is cured as a result of chemical or thermal reaction. It is a likely precursor to many new techniques that will further blur division of thermoplastic polymers and partially polymerized liquids that are polymerized by chemical reaction. *For purposes here, there is little difference in this continuum.*"

The Examiner emphasizes this last line because applicants state on the record that for this application there is little difference between thermoplastic resins and thermoplastic vulcanizates. Booth indicate that the thermoplastic selection is not important and state on column 8, line 15 and on, that "of paramount importance" is the fact that the thermoplastic resin is not restricted. Thus the distinction between the claimed thermoplastic vulcanizate and the breadth of the thermoplastic family found in Booth is unclear, particularly since applicants indicate that, for purposes of this application, there is not really a difference between the two and that the division between the two is, in fact, "blurred". For this reason applicants' argument is not persuasive.

11. Claims 73, 75 to 88 and 90 to 96 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 to 26 of copending Application No. 11/190,505. Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons consistent with those given for the rejection over 6,921,789.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
4/5/06